

140666

PALMERTON ZINC

RI/FS OVERSIGHT

FOR EPA TES III

WORK PLAN

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Waste Programs Enforcement  
Washington, D.C. 20460

Work Assignment No.	:	374
EPA Region	:	III
Site No.	:	3P26
Date Prepared	:	May 19, 1987
Contract No.	:	68-01-7331
CDM Federal Programs		
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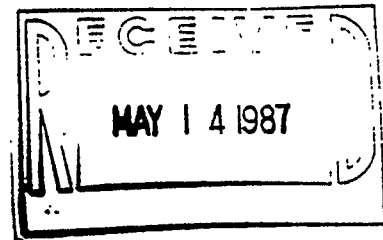
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ORIGINAL

RI/FS OVERSIGHT  
PALMERTON ZINC, PALMERTON, PA

TES III  
DRAFT WORK PLAN



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Work Assignment No.	:	374
EPA Region	:	3
Site No.	:	3P26
Date Prepared	:	May 13, 1987
Contract No.	:	68-01-7331
PRC No.	:	016-0374-00
Prepared By	:	PRC Environmental Management, Inc. (Shin Ahn)
Telephone No.	:	312/938-0300
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AR300002

## TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1.0 INTRODUCTION . . . . .	1
1.1 BACKGROUND . . . . .	1
1.2 STATEMENT OF WORK . . . . .	2
1.3 CONFLICT OF INTEREST . . . . .	4
2.0 PROJECT APPROACH . . . . .	4
2.1 ACTIVITIES . . . . .	4
2.1.1 Review Background Documents and Prepare Work Plan .	4
2.1.2 Conduct a Site Visit . . . . .	5
2.1.3 Review Quality Assurance/Quality Control (QA/QC) Plan and Ground-Water . . . . .	5
2.1.4 Review Remedial Investigation Reports . . . . .	6
2.1.5 Oversee Field Investigation and Collect Split Sample . . . .	6
2.1.6 Conduct Data Validation . . . . .	8
2.1.7 Review Feasibility Study Reports . . . . .	9
2.1.8 Support Community Relations . . . . .	9
2.1.9 Prepare Draft and Final Reports . . . . .	9
2.2 DELIVERABLES . . . . .	10
2.3 OUTLINE OF DELIVERABLES . . . . .	11
3.0 WORK SCHEDULE . . . . .	11
4.0 PERSONNEL . . . . .	11
5.0 INTERVIEWS/SUBCONTRACTORS/CONSULTANTS . . . . .	13
6.0 EXCEPTIONS TO THE ASSIGNMENT OR ANTICIPATED PROBLEMS .	13
7.0 QUALITY ASSURANCE . . . . .	14
8.0 COST ESTIMATE - Work Assignment No. 374 . . . . .	15
9.0 NARRATIVE DESCRIPTION OF COST ESTIMATE . . . . .	17

## LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
I Site sketch, Palmerton Zinc Site, Palmerton, PA . . . . .	3
2 Tentative Work Schedule for WA. No. 374 . . . . .	12

AR300003

## 1.0 INTRODUCTION

CDM Federal Programs Corporation (CDM FPC) received Work Assignment No. 374 from U.S. EPA under contract No. 68-01-7331 (TES-3). This work assignment calls for reviewing remedial investigation/feasibility study (RI/FS) documents, overseeing the field investigation, and collecting split samples at the Palmerton Zinc site. PRC Environmental Management, Inc., subcontractor to CDM FPC under TES-3, will provide the necessary assistance under this work assignment.

### 1.1 BACKGROUND

The Palmerton Zinc site is located in the vicinity of Palmerton, Pennsylvania, along the southern border of Carbon County. The site (which is on the NPL) is approximately 25 miles north of Allentown, Pennsylvania in the vicinity of the Lehigh Gap. The Palmerton Zinc site and plant facilities occupy approximately 267 ~~acres~~ acres. The western smelting plant is located west of Palmerton on the northern bank of the Lehigh River, at its confluence with Aquashicola Creek. The East Plant and slag pile are located east of Palmerton on the southern bank of the Aquashicola Creek (see Figure I).

The New Jersey Zinc Company, Inc. (NJZ) began smelting operations in the western plant in 1898. At that time, the company processed only a relatively pure zinc silicate that was mined in New Jersey. In 1911, the company began construction of another smelter on the eastern site and in 1915 began roasting spalerite, a zinc sulphide ore which also contains small amount of cadmium and lead. Since it began operating, the facility has produced primarily zinc metal and zinc oxide. It has been the nation's largest producer of zinc oxide and, until 1980, was a major producer of metallic zinc.

During the production process, large amounts of sulfur, zinc, cadmium, lead, and other metals were released into the atmosphere. The company did attempt to capture the air emissions by using a baghouse; but it has been estimated that between 13,000 and 19,800 pounds per day of zinc and between 150 and 198 pounds per day of cadmium were emitted into the air before the East Plant closed in December 1980. The solid process waste or slag, from both plants has been disposed on the East Plant site since 1913. Since that time, approximately 33

million tons of slag have accumulated. The disposal area, referred to as the "slag pile" or "cinder bank," now extends 2.5 miles along the foot of Blue Mountain and the Aquashicola Creek. The cinder bank is approximately 100 feet high and 500 to 1,000 feet wide in places. No chemical treatment was performed on the slag prior to disposal; however, it was graded and segregated according to its remaining zinc content.

The EPA was concerned about the environmental and public health problems associated with unregulated air emissions of zinc, cadmium, lead, and other heavy metals from the smelter and the problems associated with the large cinder bank.

The EPA identified New Jersey Zinc Company, Inc. (NJZ) and Gulf & Western Industries, Inc. (G&W), a one time owner/operator at this site, as responsible parties (RP) contaminating this site. On September 24, 1985, the U.S. EPA entered into a consent order with the above parties under Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). This action required NJZ to conduct an RI/FS for the Palmerton zinc plant - cinder bank and G & W to conduct an RI/FS on certain off-site areas. Since then, the RI/FS work has been carried out by the responsible parties through their contractor, R.E. Wright Associates, Inc. (REWAI). According to the EPA primary contact for this assignment, the RI work by G & W has been completed and G & W is in the process of preparing an RI/FS report. The RI work by NJZ is almost at the final phase. EPA expects to receive from NJZ an analytical data report from the final round of on-site CERCLA well sampling by the end of May 1987. EPA also expects to receive the RI report from NJZ by June 23, 1987.

## 1.2 STATEMENT OF WORK

The project approach described in this work plan is based on the statement of work outlined in EPA's work assignment, a preliminary review of site background information obtained from EPA files, and discussions with the EPA primary contact, Ms. Patricia M. Tan (215/597-3164). In summary, the work involves reviewing documents, overseeing the RPs' field investigation, collecting split samples, performing data validation, and preparing reports.



### 1.3 CONFLICT OF INTEREST

After reviewing the legal requirements of this work, PRC certifies that, to the best of its knowledge, it has no conflicts of interest with potentially responsible parties made known to PRC, or with previous or ongoing work at this site. We also certify that we have no organizational conflicts of interest with respect to the site.

PRC is aware of its professional obligation to ensure that the staff assigned to this work understand the legal implications of these conflict of interest requirements; and, to the best of PRC's knowledge, the staff on this work assignment has no conflicts of interest with performing work on this site.

## 2.0 PROJECT APPROACH

### 2.1 ACTIVITIES

The following activities will be performed in completing this work assignment.

#### 2.1.1 Review Background Documents and Prepare Work Plan

PRC personnel visited the EPA Region 3 office on April 15, 1987, to discuss the project with the EPA primary contact and to perform a preliminary review of background information to develop a basic understanding of the site and develop the scope of work, schedule, and estimated budget. We obtained relevant documents describing activities that have taken place at the site from EPA files. We will also obtain other relevant information from state and local files, if any. Based on this review, we will prepare a draft work plan for RI/FS oversight and submit it to EPA. A final work plan will be prepared approximately 1 week following PRC's receipt of EPA's comments on the draft work plan. We will also prepare and submit to EPA a list of documents to be reviewed by PRC. EPA will advise PRC of any additional documents to be reviewed.

### 2.1.2 Conduct a Site Visit

PRC will conduct a one-day site visit after we submit the draft work plan to EPA. We will observe site conditions and identify specific site features that may affect the performance of field work. We will notify the EPA primary contact of the date of the site visit so that she can make access arrangements. We will also prepare a preliminary health and safety plan for the site visit for CDM FPC review and approval. After visiting the site, we will prepare a trip report and submit it to EPA through CDM FPC, documenting the site reconnaissance.

### 2.1.3 Review Quality Assurance/Quality Control (QA/QC) Plan and Ground-Water Data

According to the primary contact, EPA will request NJZ to submit to EPA ground-water data generated from samples taken in the week of March 23, 1987, associated QA/QC plan, and other relevant documents. At the request of EPA, PRC will evaluate NJZ's QA/QC plan, in accordance with EPA guidance documents, to determine its adequacy. Then PRC will evaluate whether the data were generated in accordance with the QA/QC plan. EPA requested that PRC check the sampling and analysis of five water samples. Completion of this activity is contingent upon receipt by PRC of an adequate supporting laboratory data package, completed custody forms, and field log books. PRC anticipates that EPA will receive the ground water data and associated QA/QC plan from NJZ at the end of May 1987. PRC will use the following references for this review:

- o Guidance for Preparation of Combined Work/Quality Assurance Project Plans for Environmental Monitoring, U.S. EPA, May 1984
- o Laboratory Data Validation, Functional Guidelines for Evaluation Inorganic Analysis, U.S. EPA Office of Emergency and Remedial Response
- o Interim Guidelines and Specifications for Preparing Quality Project Plans (QAMS-005/80)
- o Users Guide to the Contract Laboratory Program
- o EPA NEIC Policies and Procedures Manual
- o SW-846
- o Guidelines Establishing Test Procedures for the Analysis of Pollutants under CWA

PRC will prepare and submit to EPA through CDM FPC a comment letter report. After EPA reviews the draft letter report and PRC incorporates EPA comments in a final letter report, a meeting may be conducted between PRC and EPA to discuss the conclusion of the letter report.

#### **2.1.4 Review Remedial Investigation Reports**

PRC will review and evaluate the draft and final remedial investigation reports and related documents prepared by RPs (NJZ and G&W) to identify if sufficient information has been collected at the site by the RPs to accomplish the objectives as addressed in the Site Operation Plan (SOP) of the consent order. PRC will prepare a draft RI evaluation report for each of the two draft RI reports that will present the following:

- o An assessment of whether the RPs accomplished the objectives of the RI as specified in the SOP of the consent order.
- o An assessment of how the RI reports meet the requirements of the National Contingency Plan (NCP), the RI guidance, and the Superfund Amendments and Reauthorization Act (SARA).
- o Evaluation of the RP data quality.
- o Recommendations for gathering additional information, if necessary.

Two draft RI evaluation reports will be submitted to EPA through CDM FPC within five weeks after we receive the draft RI reports. Two final RI evaluation reports will be submitted to EPA through CDM FPC three weeks after we receive EPA comments on our draft reports. PRC will also submit to EPA through CDM FPC a letter report for each of the two final RI reports. A meeting may be conducted between PRC and EPA to discuss the final RI evaluation reports.

#### **2.1.5 Oversee Field Investigation and Collect Split Sample**

According to the primary contact, NJZ plans a clean closure of its RCRA surface impoundment by removing the contaminated soil in the impoundment. NJZ plans to take soil samples to determine whether additional soil needs to be excavated or whether limits of excavation have been reached. The primary contact

also expects that constructing additional wells around the impoundment will be necessary for RCRA assessment monitoring.

EPA requested PRC to oversee the field work related to well construction and to collect split samples of soil from the impoundment and of ground water from RCRA wells around the impoundment. PRC will develop and submit to EPA through CDM FPC a detailed scope of work for overseeing the field investigation based on the NJZ's work plan.

At the request of the primary contact, PRC will split 20 percent of samples from each medium. Although the exact number of samples to be collected cannot be determined at this time, PRC has assumed that 24 ground-water and 12 soil samples will be split. PRC also assumed that 4 weeks will be necessary for overseeing the field investigation, including split sample collection. All analytical work will be done through the Contract Laboratory Program (CLP); arrangements for analyses will be made by U.S. EPA Region 3 through the U.S. EPA Sample Management Office. PRC will obtain sample bottles from the Sample Bottle Repository Program, collect the samples, and ship them to the laboratory designated for analysis. PRC will prepare a quality assurance project plan describing split sample collection activities and include it in the scope of work.

If the RP's field work is not performed in accordance with the approved work plan, or in an acceptable manner, PRC oversight staff will, if possible, immediately inform the EPA primary contact of this problem. PRC will prepare a field trip report and submit it to EPA through CDM FPC for review. The report will contain a chronology of oversight event, daily logs of all personnel who were on-site, and a summary of non-compliances, disputes, and corrective actions.

After reviewing RI reports, if PRC and EPA determine that the RI is not adequate to accomplish the stated objectives, as specified in the SOP of the consent order, and to meet the requirements of the relevant federal and state regulations, RPs may need to conduct additional RI work. Then PRC will prepare a detailed scope of work for overseeing the additional field investigation to be performed by the RPs according to the RPs' Site Operation Plan. This additional field investigation could include media sampling, source testing, geology/hydrogeology

investigation, geophysics, and field screening/analysis. PRC will also review the RPs' Site Operation Plans for additional work to determine their adequacy.

The following documents will be used for reviewing the site operation plans:

- o SARA
- o NCP
- o Consent order
- o EPA's "Guidance on Remedial Investigations under CERCLA" (June 1985)
- o EPA Guidance on Quality Assurance, as specified in Section 2.1.3 of this work plan

PRC will prepare and submit to EPA through CDM FPC a second field trip report summarizing all oversight activities.

#### 2.1.6 Conduct Data Validation

PRC will review and validate split sample data generated by the CLP laboratories. Data validation will include a review of sample handling procedures, field and laboratory QA/QC practices, and analytical results. PRC will use standard U.S. EPA data validation protocols in completing this activity. In addition, PRC will contact the Region 3 Central Regional Laboratory to identify any specific Region 3 requirements that must be included in the validation. PRC will prepare and submit to EPA through CDM FPC a letter report summarizing sampling results and data validation efforts.

PRC will also review and validate data for samples collected by the RPs' contractor, ~~REWAL~~. This activity has been requested by the primary contact. PRC has assumed that a maximum of 10 RP samples will be validated. Completion of this activity is contingent upon receipt by PRC of all sample results and supporting information required for data validation. PRC will include the results of RP data validation in the letter report that summarizes split sample results.

#### **2.1.7 Review Feasibility Study Reports**

PRC will review and evaluate the draft and final FS reports and accompanying documents to determine if appropriate criteria and guidelines established in the NCP and the FS guidance are addressed.

PRC will prepare and submit the FS evaluation reports to EPA through CDM FPC within 5 weeks after receiving the draft FS documents from the RPs. The final evaluation reports will be submitted to EPA through CDM FPC 3 weeks following the receipt of EPA's comments on the draft reports. The FS reports will include the following items:

- o An assessment of how the FS documents meet the requirements of the NCP, FS Guidance, and SARA.
- o Recommendations for the development and evaluation of additional alternatives, if necessary.
- o Evaluation of the cost estimates for the remedial action alternatives in the FS.

PRC will prepare and submit a comment letter report to EPA through CDM FPC for each of the two final FS reports. A meeting may be conducted between PRC and EPA to discuss the final FS evaluation reports.

#### **2.1.8 Support Community Relations**

PRC will assist EPA with public meetings in terms of providing fact sheets on the project and technical personnel. PRC will report on oversight field activities, if necessary, and will assist EPA in explaining RI/FS events to the public. PRC assumed that two public meetings will be necessary at the completion of the remedial investigation and feasibility study.

#### **2.1.9 Prepare Draft and Final Reports**

PRC will prepare and submit to EPA through CDM FPC a draft report of all our work after the completion of all tasks. PRC will prepare and submit to EPA through CDM FPC a final report within 3 weeks of receiving EPA comments on our draft report.

## 2.2 DELIVERABLES

PRC will submit the following deliverables under this work assignment. Each deliverable is listed below with a tentative submittal date.

- o Draft work plan (May 18)
- o Final work plan (within 1 week of receipt of EPA comments by PRC)
- o Site visit report (within 2 weeks of site visit)
- o Draft report for review of QA/QC plan and ground-water data (within 5 weeks of receipt of document by PRC)
- o Final report for review of QA/QC Plan and ground-water data (within 3 weeks of receipt of EPA comments by PRC)
- o Draft RI evaluation reports (two reports) (within 5 weeks of receipt of reports by PRC)
- o Final RI evaluation reports (two reports) (within 3 weeks of receipt of EPA comments on the draft reports)
- o Scope of work for overseeing field work, including Quality Assurance Project Plan for split sample collection (within 3 weeks of receipt of RP's work plan by PRC).
- o Field trip report for oversight of the field investigation and split sample collection (within 4 weeks of completing oversight work)
- o Data validation report (within 5 weeks of receipt of all sampling data and supporting material)
- o Draft FS evaluation reports (two reports) (within 5 weeks of receipt of report by PRC)
- o Final FS evaluation reports (within 3 weeks of receipt of EPA comments on the draft report by PRC)
- o Letter reports for RPs final RI and FS Reports (within 3 weeks of receipt of reports by PRC)
- o Draft final report (within 4 weeks after completing all tasks)
- o Final report (within 3 weeks of receipt of EPA comments on the draft report by PRC)

In addition to these deliverables, PRC will submit to EPA through CDM FPC monthly reports detailing the technical and financial progress of the project. PRC will inform the primary contact of project status on a weekly basis.

PRC will discuss all schedule changes with the U.S. EPA primary contact and will confirm these changes in writing. Copies of written confirmation will be sent to CDM FPC.

## 2.3 OUTLINE OF DELIVERABLES

In general, the draft and final reports may be structured as follows:

- o Introduction
- o Background
- o Document Review Comments
- o Conclusions and Recommendations

## 3.0 WORK SCHEDULE

Figure 2 shows a tentative work schedule for TES-3 Work Assignment No. 374.

## 4.0 PERSONNEL

### Work Assignment Manager, WA No. 374

Shin Ahn (P3), Environmental Engineer, P.E.  
(312) 938-0300

### Principal Investigator

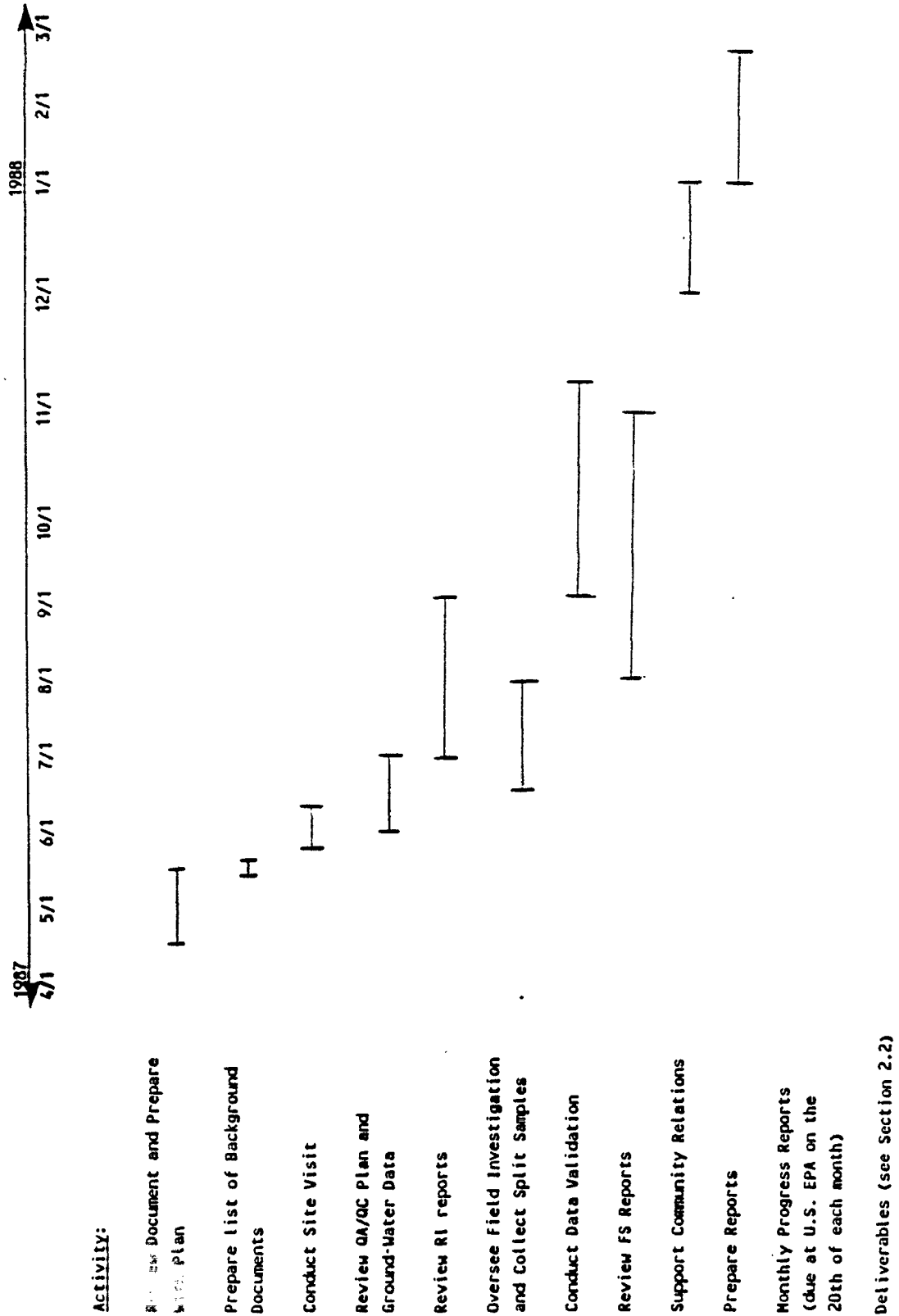
Tom Hahne (P2), Geologist  
(312) 938-0300

### Support Staff

Paul Lambert (P3), Geologist  
Ken Partymiller (P4), Chemist  
Anne Sause (P1), Field Investigator  
Other PRC Staff

Figure 2

Tentative Work Schedule for UA. No. 374



## 5.0 INTERVIEWS/SUBCONTRACTORS/CONSULTANTS

PRC may interview RPs, the RPs' contractor, or state personnel who are familiar with this site. The interview will be conducted under the direction of, and with the prior clearance from the EPA primary contact. No subcontractors or consultants are anticipated at this time.

## 6.0 EXCEPTIONS TO THE ASSIGNMENT OR ANTICIPATED PROBLEMS

PRC's discussions with the U.S. EPA primary contact have indicated that this work assignment is more complex than the work assignment action form suggests. The activities in Section 2.0 and the cost estimate in Section 8.0 of this work plan are based on PRC's understanding of U.S. EPA's requirements for this project. Both the cost and level of effort (LOE) greatly exceed the amounts initially allocated for this work assignment.

PRC has assumed that our on-site activities are scheduled to last 4 weeks. PRC has also assumed that 36 split samples will be collected and that data validation will be carried out for 46 samples. If these assumptions are incorrect, LOE and cost will have to be modified.

The volume and complexity of the RI and FS reports for review are unknown at this time. If the volume and complexity of these reports are greater than originally anticipated, LOE and cost may have to be increased.

Finally, if the RP's RI work is determined to be inadequate and RP needs additional field work, LOE and cost associated with reviewing RPs' work plan, overseeing field investigation, collecting split samples, performing data validation, and preparing the trip report will have to be added to the cost estimate in Section 8.0 of this work plan.

Based upon our current knowledge of this work assignment, the level of effort to perform these tasks through September 30, 1987 is reflected as the Base Period Estimate and the level of effort to complete these tasks after September 30, 1987 is shown as the Option Period Estimate.

## 7.0 QUALITY ASSURANCE

All PRC work on this contract will be performed in accordance with the PRC TES-3 WA Program Plan, dated February 6, 1987. This QA Program Plan is in accordance with the CDM Quality Assurance Program incorporated by reference in the TES-3 contract. Activities defined in this work plan may be the subject of a system audit conducted by the CDM QA staff to check on adherence to the PRC QA Program Plan. Such audit results will be included in the appropriate Monthly Progress Report. PRC's QC Coordinator, Mr. Daniel Chow, has reviewed this work plan for QA requirements. PRC's QC coordinators (Daniel Chow, David Homer, John ~~Dirgo~~) will maintain QA oversight throughout the duration of the project. PRC will prepare a quality assurance project plan for split sampling (within three weeks of receipt of RP's work plan by PRC) (see Section 2.1.5). PRC will submit this plan to CDM FPC for approval prior to submittal to U.S. EPA.

## 9.0 NARRATIVE DESCRIPTION OF COST ESTIMATE

**LOE HOURS:** Level of Effort Hours includes billable time for personnel such as engineers, scientists, draftsmen, technicians, statisticians, and programmers, but not support personnel such as company management, typists, and key punch operators.

**CLERICAL HOURS:** Includes billable time for such personnel as clerks and typists.

**DIRECT LABOR:** Direct Labor charges related to LOE and clerical labor hours are directly attributable to a specific work activity authorized by a work assignment. Such work assignment labor would be necessary to produce a particular end product or provide a particular service. Direct Labor charges are calculated by multiplying an individual's directly chargeable time by his hourly rate.

**TRAVEL:** Travel costs incurred in carrying out work activity authorized by the work assignment and included in this category are such costs as airfare, ground transportation, meals, and lodging.

**ODCs:** Other Direct Costs are incurred in carrying out work activities authorized by a work assignment. Examples of ODCs are expert witness fees, long distance telephone charges, postage and other document delivery charges, and duplication and reproduction.

**INDIRECT COSTS:** These are types of costs which are not directly related to a specific work activity, but are "support-type" costs that the company must incur to continue operations. These costs should be incorporated in the accounting system because they are costs of doing business. Such costs normally include rent, insurance indirect labor costs of "support-type" personnel, depreciation, and supplies, among others. These various types of overhead costs are accumulated in groups called "overhead pools." The number of "overhead pools" can range from one to several hundred depending on the complexity of operations. The most commonly used "overhead pools" are Fringe Benefits, Overhead, and General & Administrative Expense. Since different firms have their own "overhead pool" nomenclature, all such costs are aggregated into the indirect costs category.

**FEE:** Fee is the portion of a contractor's charges known as profit. Profit generally is characterized as the basic motive of business enterprise and represents a projected monetary excess realized by a contractor after deducting costs (both direct and indirect) incurred in performance of a task.